

MOVING FROM INDICATORS TO FIELD WORK

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April 27, 2006

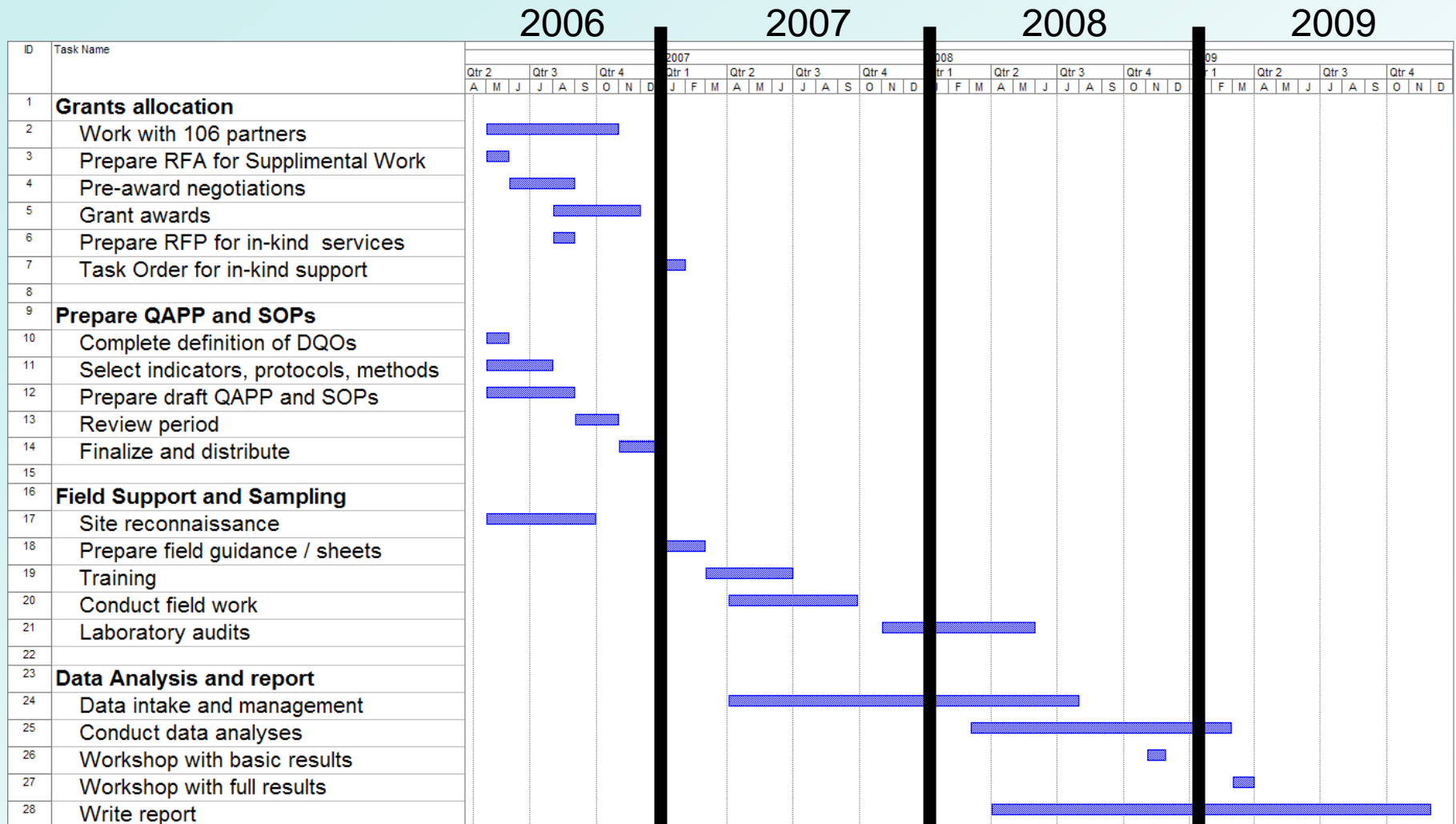


Session Agenda

- Overview of schedule for key activities
- Grants allocation
- Developing field protocols
 - Sample reach/layout
 - Collection of samples
 - Field QA/QC
- Laboratory methods
 - Sample processing methods
 - Lab QA/QC
 - Inter-lab variability



Overall Timeline



Timeline for State Activities

ID	Task Name	2007												2008												2009														
		Qtr 2			Qtr 3			Qtr 4			Qtr 1			Qtr 2			Qtr 3			Qtr 4			Qtr 1			Qtr 2			Qtr 3			Qtr 4			Qtr 1			Qtr 2		
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	
1	Grants allocation																																							
2	Work with 106 partners																																							
3	Pre-award negotiations																																							
4	Grant awards																																							
5																																								
6	Prepare QAPP and SOPs																																							
7	Review period																																							
8	Finalize and distribute																																							
9																																								
10	Field Support and Sampling																																							
11	Site reconnaissance																																							
12	Training																																							
13	Conduct field work																																							
14																																								
15	Data Analysis and report																																							
16	Workshop with basic results																																							
17	Workshop with full results																																							

Grants/Resource Allocation

- Distribute 106 survey fund for lakes based on site allocation during summer 2006
- Award EPA contracts to provide in-kind services by January 2007
- Award separate grants for survey enhancements, if resources permit, between summer and fall 2006



Types of Activities Funded

- Site reconnaissance
- Field sample collection
- Laboratory analysis
- Participation in national/regional meetings and conference calls
- Participation in review and feedback on draft materials

Allocation Options

- Option 1: State receives \$8000 per site identified in the random draw
- Option 2: State receives \$4000 per site for field work and requests EPA provide \$4000 per site as in-kind contractor services for the lab analysis
- Option 3: State requests EPA provide \$8000 per site as in-kind contractor services

Contents of Quality Assurance Project Plan

- Purpose and objectives
- Data quality objectives
- Survey design for site selection
- Core indicators/measures
- Field procedures
- Lab procedures
- Data management
- Data analysis and interpretation



Developing Field Protocols

- Evaluation of Conference input and other studies (States, NES, EMAP, Region 1, Lakes Biocriteria Guidance, USGS, etc.)
- Select sampling layouts and methods that are representative, cost-effective, widely used, reproducible, well documented
- Prepare draft SOPs and solicit comments
- Refine and finalize SOPs
- Reflect in QAPP

Sampling Approach/Layout

- Possible approach for discussion
 - Water chemistry at a single 'index' location
 - 'Index' location at deepest point of lake
 - Water samples from 1.5 meter depth (0.5 m for very shallow lakes)
 - Habitat and sediment/benthic sampling at 10 locations spaced around the lake
 - Fish locations selected in the field; target different macrohabitats
 - Pathogens at sediment/benthic locations

Sample Collection Methods

- Possible approach for discussion
 - Habitat: observation based ranking of littoral and riparian areas
 - Benthic sampling using cores in sublittoral zone
 - Specific fish collection methods tailored to macrohabitat
 - Water chemistry sub-surface grab and secchi disk

Field QA/QC

- Standardized protocols
- Training of all crew and auditors
- Standardize field equipment and supplies, data sheets, site packages
- Audit field crews
- Resample 10% of sites (91 sites)



Laboratory Protocols

- Develop SOPs using same approach as development of field protocols
 - Review existing practices
 - Prepare draft for review and comment
 - Finalize and reflect in QAPP
- Key issues related to lab analysis
 - Capacity to process samples
 - QA/QC related to use of multiple labs



Stay Involved!

- EPA will prepare draft field methods, incorporating today's feedback
- Volunteer to review the drafts!
- Contact EPA Regional Lake Survey Coordinators (list in Notebook under "Additional Resources")
- Contact EPA HQ Lakes Survey Team:
 - Gutenson.Otto@epa.gov
 - Holdsworth.Susan@epa.gov
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